

We claim:

1. A Fibre Channel Arbitrated Loop interconnect system comprising:
  - a first port,
  - a second port,
  - 5       said first and second ports including port logic to monitor certain arbitrated loop primitives,
  - a crossbar switch coupled to said first and second ports,
  - a route determination apparatus including a routing table consisting of ALPA addresses and their associated ports, the route determination apparatus coupled to each port and the crossbar switch,
  - 10       whereby the crossbar switch creates paths between the ports based on arbitrated loop primitives.
2.       The interconnect system of claim 1 whereby the arbitrated loop primitives
  - 15       that cause the crossbar switch to create paths between ports includes one or more of the following: ARB, OPN and CLS.
3.       A system for interconnecting Fibre Channel Arbitrated Loop devices comprising:
  - 20       a first Arbitrated Loop containing one or more Fibre Channel arbitrated loop devices,
  - a second Arbitrated Loop Device,
  - a Fibre Channel Arbitrated Loop interconnect system, the interconnect system including:
    - 25       a first port containing port logic coupled to the first Arbitrated Loop,
    - a second port containing port logic coupled to the second Arbitrated Loop,
    - route determination apparatus for selecting a route between ports,

the said route determination apparatus selecting routes based on received Fibre Channel Arbitrated Loop primitives from the ports and including a routing table containing ALPA addresses and their associated ports,

5 connectivity apparatus coupled to the first and second ports and to the route determination apparatus for switching frames between ports under control of the route determination apparatus,

the said connectivity apparatus is a crossbar switch,

whereby Fibre Channel frames are transferred between a device on the first  
10 Arbitrated Loop and the second Arbitrated Loop Device.

4. The interconnect system of claim 3 whereby the Arbitrated Loop primitives that cause the crossbar switch to create paths between ports includes one or more of the following: ARB, OPN and CLS.

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5. The interconnect system of claim 3 including a R\_RDY counter to count R\_RDY's sent by the originating Fibre Channel Arbitrated Loop device before the OPN response is received by the originating Fibre Channel Arbitrated Loop Device.

20 6. The interconnect system of claim 3 whereby the second Arbitrated Loop device is on the first port.

7. The interconnect system of claim 3 whereby the second Arbitrated Loop device is on the second port.

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